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Recent Economic Performance

The Parkersburg Area¹ economy has generally struggled over the past several years. The five-county region avoided the economic downturn that plagued several regions in West Virginia between 2012 and 2015, as payrolls increased nearly 2,000 during this period of time. In more recent years, however, the Parkersburg Area economy has struggled significantly, with payrolls falling by more than 3,700 by mid-2018. The region's economy does appear to have stabilized thanks to some recent growth in natural gas output and pipeline infrastructure as well as continued development of the Hino manufacturing facility, economic recovery remains tenuous due to structural issues

that have hurt several service-providing sectors on both a regional and national scale.²

PERFORMANCE BY COUNTY While the area as a whole has experienced a great deal of volatility in recent years, differences across the region's five counties are even more amplified. Wood County is the largest county in the region both in terms of population and jobs, and generally serves as the region's economic and population center thanks to the cities of Parkersburg and Vienna. Unfortunately, Wood County has also accounted for the majority of job losses registered during the past three-plus years, and a sizable share of these declines have been concentrated in the local retail sector following a string of store closures in 2017 and 2018.

Though appreciably smaller in size, Ritchie County has been one of the five-county region's most solid performers over the past several years, reflecting consistent gains in local manufacturing activity and additional gains in natural gas production. Indeed, natural gas output in the county increased 29 percent during 2018 as growing industrial and utility sector demand along with new pipelines entering service over the past year or so have incentivized additional production and exploration activity in Ritchie and other shale gas-producing counties.

Washington County has also posted moderate growth over the past few years. Although it trails other nearby counties in Ohio in terms of energy-producing jobs, the surge in Marcellus and Utica gas output throughout the tristate area has been a boon to segments of the county's manufacturing base, particularly those companies that supply metals, machinery and other key inputs to the upstream and midstream portions of the gas industry.

Pleasants County's economy has generally been stable over the past couple of years, with slight gains in a few sectors canceling out losses in others. However, the

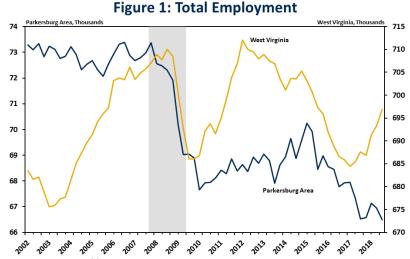
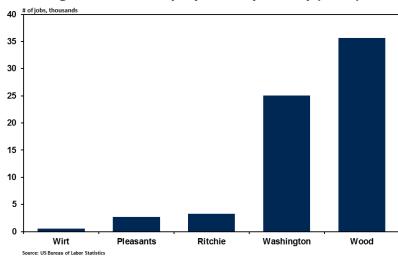


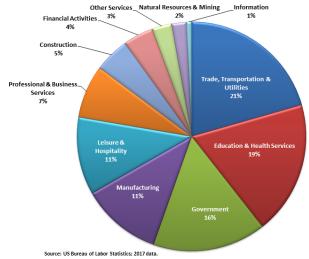
Figure 2: Total Employment by County (2017)



¹ For the purposes of this report, The Parkersburg Area is comprised of five counties: Pleasants, Ritchie, Wirt and Wood counties in West Virginia and Washington County in Ohio.

² Sources for historical information are noted in each figure.

Figure 3: Parkersburg Area Employment Distribution by Sector



county did receive some measured positive news with the recent announcement that, rather than closing at the beginning of 2019, the Pleasants Power Station at Willow Island will remain in operation until 2022. Wirt County payrolls have mostly declined over the past five years as the state's least populated county has not recovered from the closure of Mustang Survival's facility. Also, lackluster growth in Wood County, the destination for most of the county's labor force, continues to weigh on Wirt's prospects.

MANUFACTURING The manufacturing sector remains a critical component of the Parkersburg Area's economy. Indeed, plastics, fabricated metals, chemicals and even the auto industry make up the base of the region's manufacturing activity. Even though the past couple of decades have been characterized by sizable job losses, the sector has stabilized in recent years and some of the area's key subsectors have recorded appreciable payroll growth.

The natural gas industry's expansion throughout Pennsylvania, Ohio and West Virginia, has accounted for some of the sector's positive turn in the five-county region over the past several years. In addition to driving demand for the drilling and transmission line pipe manufactured locally, the dramatic growth in natural gas output has also factored into lowering operational costs for chemicals and plastics manufacturers that use gas as a feedstock. Plastics manufacturing in the Parkersburg Area has also benefited from the ongoing recovery in single-family home construction activity across most of the US.

Auto manufacturing is also becoming a larger player in the area's industrial base. Japanese truck manufacturer Hino Motors Manufacturing U.S.A. is on track to complete its \$100 million investment in the former Coldwater Creek distribution center in the coming months. The facility will be West Virginia's first full vehicle production and assembly plant ever and will lead the company to supplement its current workforce with an additional 250 people, reaching a total of nearly 550 employees.

NATURAL GAS Energy production has been a linchpin

to economic activity in many of West Virginia's regions over the years. Even though the energy sector has a relatively small footprint in the five-county area's overall economic base, its importance has grown significantly since the early-2010s due to the natural gas industry. Ritchie County is the area's primary source of gas production, with the rural county situated at the southern portion of West Virginia's shale gas region. Ritchie ranked as the state's third highest-producing county (or roughly 13 percent of the overall volume) in terms of gas withdrawn from wells in 2018.

In addition to the surge in hiring by drilling and exploration firms over the past year or so, other segments of the industry's supply chain have registered positive gains — ranging from trucking companies that haul fracking sand, brining water and equipment to drilling sites and business support firms that provide contract labor, engineering and other auxiliary services. Finally, the recent additions of the Mountaineer XPress pipeline and the Sherwood Lateral for the Rover II pipeline have opened the region's gas output to domestic and international markets and help the area be more attractive to potential growth in petrochemical manufacturing.

CONSTRUCTION The region's construction sector has experienced some significant volatility over the past decade or so. Residential construction activity has been the most stable component overall, even seeing a moderate uptick, but the up-and-down performance of the natural gas industry in recent years has been the driving force behind the construction sector's volatile performance. Over the past couple of years, energy-related construction activity has increased significantly with the installation of TransCanada's through Ritchie and Wirt (as well as several neighboring counties), along with three large compressor stations. Highway and other

publicly-funded infrastructure have emerged as a key source of construction activity not only in the region, but for the state as a whole. Increased funding on new projects that were identified in the Roads to Prosperity bonding program (such as the \$36 million Parkersburg-St Mary's project) and a concerted effort to repair deteriorating secondary roads throughout the state have bolstered the sector to some extent. Finally, as mentioned above, the \$100 million investment by Hino to re-develop the Coldwater Creek distribution center into the state's first vehicle assembly plant has also provided a boost to regional construction activity in the past several quarters.

SERVICE-PROVIDING SECTORS Trade, transportation, and utilities is the Parkersburg Area's largest sector in terms of

employment, but its underlying segments have posted noticeably different performances during the past few years. Retail trade held in a relatively stable range until the early-2017, but conditions worsened measurably over the remainder of the year due to the shuttering of several stores. In addition, the sector has faced other broader national-level headwinds such as the increased use of Amazon and other ecommerce platforms to purchase food, clothes and other goods. Increased automation and the expansion of selfcheckout kiosks has only placed additional downward pressure on the demand for labor by traditional brick-and-mortar stores. Wholesale trade has remained in a secular decline as automation and a shift to other forms of inventory management have eroded the use of merchant wholesalers.

Transportation and warehousing activity in the area has benefited from rising demand from the natural gas industry, while at the same time the downward trend in coal's share in electricity generation has weighed heavily on river barge shipments all along the Ohio River. Employment in the region's electric utility sector has trended lower since 2012, as the rise in operational costs and a surge in competition from more flexible and efficient natural gas-fired power plants have combined to hurt the area's aging coal-fired power plants. The area's utility sector did experience a temporary reprieve as the Pleasants Power Station will remain in operation until 2022, avoiding the shutdown that was announced by

FirstEnergy and previously scheduled to occur during the first quarter of 2019.

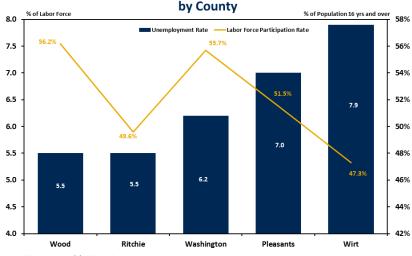
UNEMPLOYMENT The Parkersburg Area's unemployment rate has tended to track broader statewide trends for most of the past two decades. Since reaching a peak of just over 10 percent in early-2010, the unemployment rate consistently declined to the lower 6.0-percent range by mid-2014.

The area's unemployment rate experienced some volatility between late-2014 and early-2016 thanks to the energy sector's downturn, which helped to push the regional jobless rate up to the mid-6.0 percent range. As the labor market has begun to stabilize in preceding years,



Figure 4: Unemployment Rate





Source: US Bureau of Labor Statistics; US Census Bureau Note: Unemployment rate represents 2018 annual average; Labor force participation rate is from 2017

Figure 6: Per Capita Personal Income

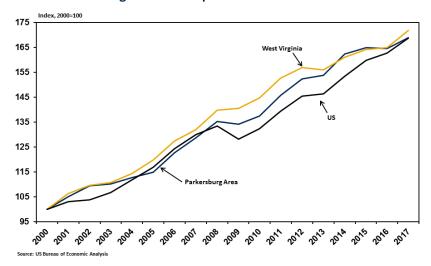
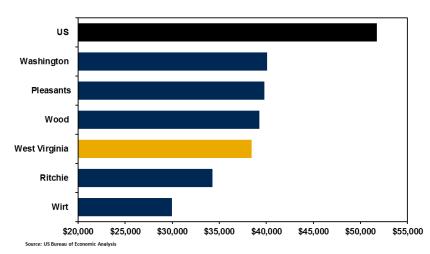


Figure 7: Per Capita Personal Income by Area (2017)



the rate has tracked lower in a fairly steady fashion and currently sits at 5.5 percent. Even though the five-county area's economy has yet to gain traction in terms of generating job growth, improvements in nearby labor markets thanks to ramped-up development of the upstream and midstream segments of the Marcellus and Utica Shale in Ohio and West Virginia have helped to lower the Parkersburg Area's unemployment rate in recent quarters. The jobless rate varies by a fairly wide margin in the region, coming in at a low of 5.5 percent for calendar year 2018 in Wood and Ritchie counties up to a high of 7.9 percent in Wirt County.

LABOR FORCE Since 2012, the Parkersburg Area has seen its labor force contract by 4.6 percent (or

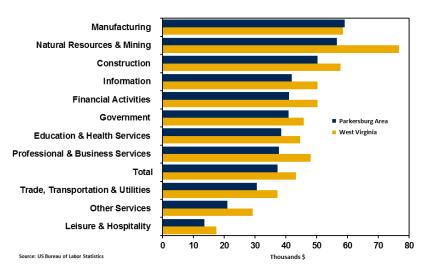
nearly 3,400 people). Some of this decline likely reflects a combination of the discouraged-worker effect, wherein individuals out of work for long periods leave the labor force altogether, and working-age adults migrating out of the region due to comparatively weak economic conditions.

Wood and Washington counties lead the region in terms of workforce participation among the adult population and exceed the overall West Virginia average by 3 to 4 percentage points. However, both counties lag the national average participation rate by several percentage points. The area's three highly-rural counties lag the statewide average workforce participation rate by roughly three to six percentage points.

INCOME Per capita income (not adjusted for inflation) in the Parkersburg Area during 2017 was \$36,700 and has increased by 11 percent since 2012. Both the region's growth rate and overall level of per capita income fall roughly in line with statewide figures, but lag comparable figures for the nation of \$51,200 and nearly 16 percent.

At the county level, per capita income in 2017 varied from roughly \$30,000 in Wirt County to nearly \$40,000 in Washington and Pleasants counties. Wood County also exceeds the statewide figure for per capita income by a slight margin as income levels averaged \$39,200 per person for 2017. Per capita income levels tend to

Figure 8: Average Annual Salary by Major Sector (2017)



be higher in these three counties due to stronger levels of workforce participation overall as well as larger shares of employment in higher wage sectors such as manufacturing and electric utilities.

In addition to their rural locations, some of the region's counties have lower income levels and slower rates of growth due to a disproportionately large share of personal income flowing into the region in the form of federal transfer payments. Indeed, relatively weaker economic conditions have combined with an older-than-normal age distribution to account for a rising share of income in the region to come from federal transfer receipts such as Social Security, Medicare, unemployment insurance and other cash transfers.

DEMOGRAPHIC CHARACTERISTICS Consistent with several of West Virginia's other economic regions, the Parkersburg Area's population has experienced sustained declines in the number of residents over a long period of time. While part of the region's population losses can be attributed to comparatively weaker economic prospects, which have fueled net out-migration, a growing deficit of births relative to deaths has prevented the area from growing the population via natural increase. Part of this is due to the area's larger-than-normal share of elderly residents, but also due to higher death rates from a host of issues ranging from heart disease to drug overdoses several younger age groups of people living in the region.

Finally, the five-county area lags the nation in many measures of educational attainment. Even with several

smaller higher education institutions in the region, such as WVU-Parkersburg, Marietta College, just over 18 percent of area residents aged 25 years and older possess at least a bachelor's degree—more than 12 percentage points lower than the national average. On a positive note, these colleges along with the presence of technical schools allow the area to provide an array of 2-year degree and post-secondary certificate programs that provide skills training and placement opportunities for workers in many of the trades and craft occupations that are needed for natural gas and other emerging industries.

Figure 9: Summary Population Profiles

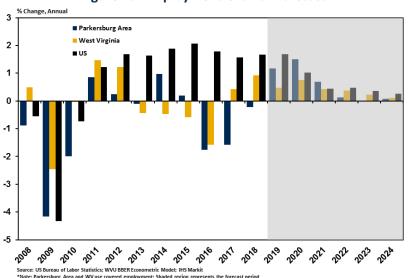
	Parkersburg Area	West Virginia	United States
Total Population (2017)	168,602	1,817,048	325,147,121
% Population Under 18 (2017)	20.5%	20.4%	22.8%
% Population 65 Years + (2017)	20.2%	18.7%	15.2%
Population with Less than High School Diploma (2017, 25 yrs. +)	10.6%	14.0%	12.8%
Population with High School Diploma, No College (2017, 25 yrs. +)	39.3%	40.7%	27.6%
Population with Some College (2017, 25 yrs. +)	31.1%	25.7%	28.9%
Population with Bachelor's Degree or Higher (2017, 25 yrs.+)	18.9%	19.6%	30.6%
Median Age (2017)	44.9	42.5	37.9
Mean Household Income (2017)	\$58,732	\$56,568	\$78,378
Average Household Size (2017)	2.39	2.49	2.73

Source: US Census Bureau

Economic Outlook

Expectations for the West Virginia and US economy during the 2019-2024 forecast horizon will have a significant impact on the performance of the Parkersburg Area going forward.³ The forecast calls for the region to emerge from its recent stint of economic weakness and post moderate job growth in the coming years.

Figure 10: Employment Growth Forecast



Overall, we anticipate total employment will increase at an average annual rate of approximately 0.5 percent through 2024. Payrolls are expected to grow at their fastest rate over the first half of the outlook period, increasing at an average annual rate of nearly 1.0 percent through 2021 due in large part to a burst in hiring by the natural gas industry, expanding nonresidential and nonbuilding construction activity as well as the eventual stabilization in several industries that have posted job losses in recent years.

Growth will slow considerably over the remainder of the forecast horizon, and even with the gains anticipated over the next five years, overall employment in the Parkersburg Area will fall short of levels seen prior to the Great Recession. The region's outlook does contain significant upside potential in the long-run, much of which hinges on the ability to capitalize on development of downstream opportunities with natural gas. One of these potential developments could include the location of an ethane

Coast to produce ethylene and polyethylene and then shipped back to manufacturers in the region for use in a range of applications. A project such as this would likely produce a significant positive economic shock for the area and could also help to stem the region's population losses going forward.

NATURAL GAS INDUSTRY Even though the industry will remain a small share of the overall economy, the forecast calls for natural gas to play a major role in shaping the region's growth going forward. In fact, natural resources and mining, which is largely made up of Ritchie County's natural gas industry, is expected to post the fastest job growth among the region's sectors and account for roughly one-fourth of jobs added on net during the outlook period. Overall, the

forecast calls for the Parkersburg Area to see an employment gain of roughly 4.4 percent annually through 2024 within this sector.

The energy sector has made large gains in output from the Marcellus and Utica shale plays, but their impacts have extended beyond jobs linked to upstream production activity. Indeed, increased infrastructure development via Mountaineer XPress and Sherwood Lateral for the Rover II pipelines offer access to distribution throughout the nation and foreign markets. The addition of more liquefied natural gas (LNG) export facilities are only expected to expand the reach of the region's gas production, as LNG exports to Asia and Europe are expected to increase rapidly over the next five years.

The energy industry will affect other sectors in the region in an outsized manner over the five-year outlook period. A large share of the area's professional and business services sector is interwoven with the natural gas industry in both

cracker facility somewhere in the Mid-Ohio Valley. Continued development of the Marcellus and Utica Shale will generate additional opportunities to develop the region's plastics and chemicals manufacturing base. Ethane crackers are key elements in this process since now the commodity must be transmitted by pipeline to the Gulf

³ All forecast estimates presented herein are derived from the West Virginia University Bureau of Business & Economic Research Econometric Model unless otherwise noted.

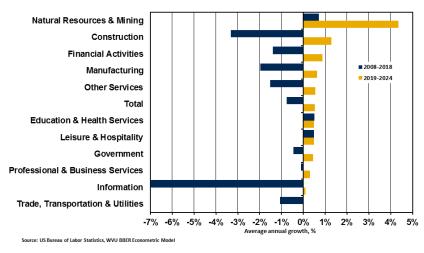
states by providing contract labor workers, as well as engineering, legal and other support services. During the forecast horizon, we anticipate the energy industry's growth, along with broader US economic gains that will buoy demand for business services firms, will cause payrolls to increase 0.3 percent per year with much healthier rates of growth over the next couple of years.

MANUFACTURING The manufacturing sector in the Parkersburg Area is expected to grow at an average annual rate of 0.6 percent. The region's chemicals industry has endured a long-term downward trend in production and employment that has resulted in the closure, relocation and downsizing at many plants over the years. By

contrast, we anticipate the Parkersburg Area's chemicals manufacturers to stabilize in the coming years. If an ethane cracker were placed in Wood County, then the chemicals manufacturers could generate far better than expectations. With the construction of new natural gas pipelines, metals manufacturers will likely see moderate growth in their respective industry. Automotive manufacting is also expected to increase in size during the outlook period due to the previously discussed Hino Motors expansion that will add 250 new jobs in the short term. Longer-term, the Hino Motors expansion has the potential to lay additional groundwork for development of a larger auto manufacturing hub spread across the Mid-Ohio and Kanawha valleys.

OTHER SECTORS Construction activity in the Parkersburg Area is expected to increase over the course of the next several years, with payrolls increasing more than 1 percent annually through 2024. Growth will be concentrated in the sector's nonresidential and nonbuilding segments, with the latter seeing a boost from the renewed focus on highways and other public infrastructure by state officials and lawmakers. The Parkersburg Area's leisure and hospitality sector is expected to see job growth on the order of 0.3 percent per year during the outlook period. With the income growth and creation of jobs in the Parkersburg Area, resturaunts will likely benefit from increased spending. Expectations for stronger income gains associated with the natural gas and construction sector's prospects should bolster hiring at food and service establishments as well as other similar businesses that are more reliant on local spending patterns.

Figure 11: Parkersburg Area Employment Growth Forecast by Sector

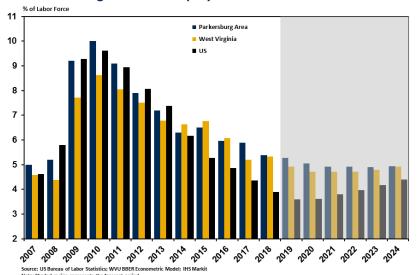


Payrolls in trade, transportation and utilities will remain flat in the forecast period due to losses in retail and utilities. Retail is not expected to struggle to the extent that it has over the last couple of years, but many of the structural industries plaguing the sector from a national perspective will be felt locally and could lead to additional closures of retail establishments in the future.

The Pleasants Power Station at Willow Island is expected to close in May 2022, barring any unexpected decisions by FirstEnergy to keep it in operation. The forecast assumes the power plant will close, resulting in the loss of nearly 200 jobs in the utilities sector alone and additional losses are possible due to the fact that many workers at the power plant are paid wages well above the regional average. Furthermore, local government tax collections would be affected as well since the facility's closure would erase a portion of the area's B&O tax base.

Education and health services is expected to add jobs at a 0.5 percent average annual rate through 2024. Healthcare demand is expected to grow consistently within the region, reflecting the region's large share of elderly residents. The sector has faced uncertainty over the past few years and that uncertainty will likely remain in place over the next several years as the Trump Administration appears to remain interested in altering some aspects of national healthcare policy, though previous efforts failed. Moreover, legal challenges to the law could lead to dramatic shifts if they are upheld by the Supreme Court.

Figure 12: Unemployment Rate Forecast



Severance tax collections from natural gas bode well for many of the area's local governments specific to Ritchie County, as do heightened property and B & O tax revenues associated with industrial development and natural gas pipeline additions in the region. Overall government employment in the Parkersburg Area is expected to increase by 0.3 to 0.4 percent per year as longer-term structural budget problems for West Virginia's state fiscal situation dampen the outlook. In addition, anticipated declines in the four-county area's population will put some limits on growth in the local public sector.

UNEMPLOYMENT OUTLOOK Unanticipated changes in labor force participation within the Parkersburg Area's labor force could cause the forecast for the regional unemployment rate to differ significantly from both its projected level and path. With that said, the forecast calls for the regional unemployment rate to fall slightly from its current levels and eventually stabilize around 5.0 percent or so by 2020. For the coming year, the jobless rate will likely remain right around current levels, or could rise slightly, as improving labor market conditions invite discouraged workers who had exited the labor force to rejoin in the hopes of finding a job. Overall, the expected path of the Parkersburg Area's jobless rate puts it largely in line with that of the state but measurably above what is anticipated for the United States.

While the unemployment rate carries some meaning for the region, it is critical to focus also on labor force participation and human capital outcomes in West Virginia and the Parkersburg area in the coming years. Historically, West Virginia's labor force participation rate has ranked as the lowest among all states, and significant portions of the Parkersburg Area have lagged the state by an appreciable margin. As a result, the region needs an adequately-trained as well as healthy and educated workforce if it seeks to achieve stronger-than-expected growth in coming years.

INCOME The forecast calls for real personal income in the Parkersburg area to grow by roughly 1.7 percent annually through 2024. This trails the statewide average by a small margin, but lags what is anticipated for the US. Although this is a generally positive sign, as it indicates purchasing power for area residents is rising, the composition of income growth by category over

the next five years does yield some cause for concern, especially given that wages and salaries are expected to grow at the slowest pace of any major income component while transfer payments will grow in importance. These sources include Social Security, Medicare and other safety net programs and will represent a growing share of the total income earned by residents in the Parkersburg area. On a positive note, the rebound in the natural gas industry is expected to yield notably strong growth in proprietor's income during the outlook period, even surpassing the rapid increase anticipated for transfer payments.

POPULATION The region's population is expected to shrink in number during the outlook period as much of the five-county area grapples with the same demographic challenges that also affect many of West Virginia's other economic regions. Specifically, three fundamental demographic issues could hinder the region's growth potential to some degree during the outlook period and into the longer term. First, workers must be educated and/or trained to meet the skill requirements in the job market. Second, the population must be healthy and not be addicted to potentially life-threatening drugs to consistently contribute to the economy in a productive manner.

Finally, a large and growing share of elderly population may limit potential economic growth as these households tend not to be part of the labor force and generate less entrepreneurial activity on average. Each of these issues are a feature in the Parkersburg Area's underlying demographic characteristics and could determine the area's ultimate potential for economic growth.

Figure 13: Population Forecast

